



## HUMBOLDT BAY MUNICIPAL WATER DISTRICT

828 SEVENTH STREET • EUREKA, CALIFORNIA 95502

OFFICE 707-443-5018 FAX 707-443-5731

Website: [www.hbmwd.com](http://www.hbmwd.com)

Agency: McKinleyville CSD

Water Loss Audit Year: CY19

### KEY AUDIT METRICS

Validity	Data Validity Score: 64	Data Validity Bank (Level): Level III
Volume	ILI: .95	Real Loss: 13.9 gallons/connections/day      Apparent Loss: 1.44 gallons/connections/day
Value	Annual Cost of Apparent Losses: \$18,885/yr.      Annual Cost of Real Losses: \$84,575/yr.	

### INFRASTRUCTURE & WATER LOSS MANAGEMENT PRACTICES:

**Infrastructure Age Profile:** 99% of smaller meters have been replaced within the last 2-3 years. Average age of pipe is +/-40 years old. Increase in building and new subdivisions continues.

**Infrastructure Replacement Policy:** Currently accumulating reserves for next goal of substantial infrastructure replacement.

**Estimated Main Failures/Year:** Minimal (<1)

**Estimated Service Failures/Year:** 15-25, depending on the year

**Extent of Proactive Leakage Management:** Proactive resolution of known/found leaks

**Other Water Loss Management Comments:**

### COMMENTS ON AUDIT METRICS & VALIDITY IMPROVEMENTS

The Infrastructure Leakage Index (ILI) of .95 describes a system that experiences leakage at **less than 1** time the modeled technical minimum for its system characteristics.

The Data Validity Score falling within Band III (51-70) suggests that next steps may be focused simultaneously on improving data reliability and evaluating cost effective interventions for water and revenue loss recovery.

Opportunities to improve the reliability of audit inputs and outputs include:

- The production meter at Northbank is scheduled to be tested and calibrated this year, however due to COVID-19 scheduling challenges, this may not be accomplished.
- All larger meters (3" and up) will be inspected and calibrated this coming year.
- Although most meters are new, to increase the "Customer Metering Inaccuracy" score, consider testing a mix of newer and older meters on an annual basis.
- Develop standardized procedure to monitor operating system pressure as related to the different pressure zones.
- Variable Production Costs may be reduced by using actual expenditures (even if averaged) rather than budgeted amounts. Breaking out "Operating Expenses" into individual categories (chemicals, lab fees, etc.) may also reduce reported Production Costs.



## HUMBOLDT BAY MUNICIPAL WATER DISTRICT

828 SEVENTH STREET • EUREKA, CALIFORNIA 95502

OFFICE 707-443-5018 FAX 707-443-5731

Website: [www.hbmwd.com](http://www.hbmwd.com)

### CERTIFIED WATER LOSS AUDIT VALIDATION REPORT

#### PART A - PROVIDED BY THE VALIDATOR

##### Audit Information:

Utility: McKinleyville CSD

PWS ID: 1210016

System Type: Potable

Utility Representation: James Henry

Audit Period: Calendar 2019

Validation Date: 10/5/20

Sufficient Supporting Documents Provided: Yes

Call Time: 3pm

##### Validation Findings & Confirmation Statement:

###### Key Audit Metrics:

Data Validity Score: 64

Data Validity Bank (Level): Level III

ILI: 0.95

Apparent Loss: 1.44 gal/conn/day

(Infrastructure Leakage Index)

Real Loss: 13.9 gal/conn/day

Non-Revenue Water as Percent of Cost of Operating System: 5.7%

##### Certification Statement by Validator:

*This water loss audit report has been Level 1 Validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34. All recommendations on Volume Derivation and Data Validity Grades were incorporated into the water audit. **Yes***

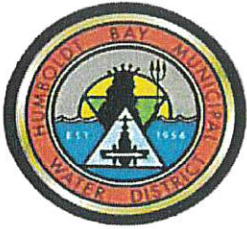
*If all recommendations regarding Volume Derivation and Data Validity Grades were NOT incorporated into the water audit, provide explanation below:*

##### Validator Information:

Water Audit Validator: Chris Harris

A handwritten signature in black ink, appearing to read "Chris Harris", is written over a horizontal line.

Validator Qualifications: Water Audit Validator Certificate issued by the CA-NV Section of the AWWA



## HUMBOLDT BAY MUNICIPAL WATER DISTRICT

828 SEVENTH STREET • EUREKA, CALIFORNIA 95502

OFFICE 707-443-5018 FAX 707-443-5731

### CERTIFIED WATER LOSS AUDIT VALIDATION REPORT, CON'T

#### PART B - PROVIDED BY THE UTILITY/AGENCY

Water Supplier Name: McKinleyville CSD

Water Supplier ID Number: 1210016

Water Audit Period: Calendar 2019

#### **Water Audit & Water Loss Improvement Steps:**

Utility/Agency to provide steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed the annual validated water audit:

This past year, the McKinleyville Community Services District has:

- Continued work on Phase 3 of the Mainline and Rehabilitation Plan, and continued developing testing locations to test soil condition against Pipe material to build a profile of pipe conditions and where to place them in the replacement schedule
- One VFD (Variable Frequency Drive) at the North Bank Pump Station has been replaced, and a second VFD will be replaced in CY20
- Moving forward into the design phase for construction of a new 4.5MG reservoir
- For increased efficiency, all meters are read within a 3-day period of the month rather than different weeks for different locations
- 99% of smaller meters are now AMR (Radio Reads)


#### **Certification Statement by Utility Executive:**

*This water loss audit report meets the requirement of California Code of Regulations, Title 23, Division 2, Chapter 7, and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in the manual, Water Audit Loss Control Programs, Manual M36, Fourth Edition and in the Free Water Audit Software version 5.*

#### **Executive Name and Position (Print)**

Pat Kaspari, General Manager

#### **Executive Signature and Date**

 10/06/2020